

REMARKS

This communication is in response to the Office Action mailed on March 06, 2006. In the Office Action, claims 1-21 and 28-33 were pending. All pending claims were rejected. In view of the following, Applicant respectfully submits that all pending claims are in condition for allowance.

The Office Action first reports that claims 1-8, 12-19, 28-31, and 33 were rejected under 35 U.S.C. §103(a) as being unpatentable over Schott (U.S. Patent No. 6,349,017) in view of Tam et al. (U.S. Patent No. 5,421,943). Additionally, claims 9-11 and 32 were rejected under 35 U.S.C. §103(a) as being unpatentable over Tam et al. in view of Schott and further in view of Berg et al. (U.S. Patent No. 6,704,256). Furthermore, claims 20 and 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Tam et al. in view of Schott and further in view of Amemiya et al. (U.S. Patent No. 6,002,550). Claims 1, 13 and 28 are pending independent claims.

Independent claim 1 recites a suspension assembly having a slider body with a trailing edge face. A bond pad is positioned on the trailing edge face and a conductive trace is connected to the bond pad to form an electrical connection. A heating element includes a low resistivity portion and a high resistivity portion. The high resistivity portion is positioned proximate the electrical connection. Furthermore, an insulating component is positioned between the conductive trace and the heating element proximate the electrical connection.

Applicant submits that independent claim 1 is non-obvious in view of the cited references because there is no motivation or suggestion to combine them to lead to the recited invention. The Federal Circuit has held that rejecting patents solely by finding prior art corollaries for the claimed elements would permit an Examiner to use a claimed invention itself as a

blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention, which would be "an illogical and inappropriate process by which to determine patentability." In re Rouffet, 149 F.3d 1350, 1357 (Fed. Cir. 1998) (citing Sensonics, Inc. v. Aerosonic Corp., 81 F.3d 1566, 1570, 38 USPQ.2d 1551, 1554 (Fed. Cir. 1996)). Even seemingly simple changes require a finding of a suggestion in the prior art to make the modification to avoid the improper use of hindsight.

Applicant simply believes that the standard used for combining references is incorrect and does not follow the current standard as set forth clearly by the Federal Circuit in In re Lee, 61 USPQ 2d 1430 (Fed. Cir. 2002). The Court of Lee held that a factual inquiry on whether to combine references must be based on objective evidence of record, which has been reinforced in a number of decisions. In re Lee at 1433, citing McGinley v. Franklin Sports, Inc., 60 USPQ 2d 1001, 1008 (Fed Cir. 2001) and Brown & Williamson Tobacco Corp. v. Phillip Morris Inc., 56 USPQ 2d 1456, 1459 (Fed. Cir. 2000).

Other notable quotes of In re Lee include "a showing of a suggestion, teaching or motivation to combine the prior art references is an 'essential component of an obviousness holding'", quoting C.R. Bar Inc. v. M3 Systems, Inc., 48 USPQ 2d 1225, 1232 (Fed. Cir. 1998), "there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant", In re Fine, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988) and "'teachings of references can be combined only if there is some suggestion or incentive to do so.'" [emphasis in the original], quoting ACS Hosp. Sys., Inc. v. Montefiore Hosp., 221 USPQ 929, 933 (Fed. Cir. 1984). Id. Thus, a showing of a suggestion, teaching or motivation to combine the prior art references is an essential component of an obviousness holding.

With the above standard in mind, Applicant submits that there is no evidence for which to combine the references Tam et al. and Schott in order to lead to the recited features in independent claim 1. In particular, the bonding provided by Tam et al. and Schott are fundamentally different. Schott utilizes bonding to form an electrical connection while Tam et al. utilizes bonding to attach a chip to a face. Tam et al. make no reference of including bond pads positioned on a trailing edge face of a slider. Instead, Tam et al. utilize a heating element positioned on the trailing edge face. The heating element is used to bond a ceramic or silicon chip 13 to the trailing edge face. Thus, including bond pads on bonding surface 12 would lead to not only an interference between heating element 15 and the bond pads of Schott but furthermore these bond pads would not have function as they would be covered by silicon chip 13. The Office Action notes that "Tam et al. teaches that a low temperature bond may not provide sufficient strength and stability." However, the ultrasonic bonding tool of Schott is concerned with forming an electrical connection between a trace and a bond pad. There exists no teaching or suggestion that the ultrasonic bonding tool of Schott needs to have improved strength and stability to form this electrical connection. Thus, it appears that the combination of Schott and Tam et al. is made by merely a matter of hindsight and not objective evidence.

Additionally, Applicant submits that, even if combined, the proposed Tam et al./Schott combination device would not include an insulation component positioned between a conductive trace and a heating element as recited in claim 1. While Tam et al. disclose a bond interface 24 positioned between a slider 11 and silicon chip 13 (see FIG. 5), bond interface 24 is fundamentally different than the insulation component recited in claim 1. In particular, the conductive trace in the proposed Tam et al./Schott combination device would need to be on the slider-

facing side of bond interface 24. However, FIGS. 1 and 2 clearly show that heating element 15 is positioned on the surface of slider 11. Therefore, heating element 15 would be on the same side of bond interface 24 as the conductive trace. Tam et al. also notest that the heating element is "in contact with" the surface to be bonded. Furthermore, interface only provides insulation so that components on interface 24 do not exceed a critical temperature. Thus, a Tam et al./Schott combination device would not include "an insulation component positioned between the conductive trace and the heating element" (emphasis added) as recited in claim 1.

For at least these reasons, Applicant submits that the combination of Tam et al. and Schott simply does not teach or suggest the features of independent claim 1. As a result, independent claim 1 and claims 2-12, depending therefrom, are believed to be allowable. Further, it is believed that many of these dependent claims independently recite subject matter that is also neither taught nor suggested by the cited references.

For example, dependent claim 5 recites "wherein the high resistivity portion is positioned in a plane generally perpendicular to the trailing edge face." The Office Action cites the face marked 16 in FIG. 5 of Schott as teaching the feature recited in claim 5. However, Applicant notes that face 16 is not a trailing edge face that includes a bond pad as recited in claim 5. Further, dependent claims 9 and 11 recite "wherein the heating element is positioned in the flex circuit."

The only mention of a heating element in any of the cited references is in Tam et al. which disclose an element on a surface of slider 11. The Office Action uses Berg et al. to describe passing a signal and power using a single flex circuit. However, a separate heating element in the flex circuit is not taught or suggested. For at least these reasons, Applicant respectfully submits that the additional features recited in

claims 5, 9, and 11 are neither taught nor suggested by the cited references. Applicant notes that claims 5, 9, and 11 are simply examples of dependent claims that are believed to contain independently patentable subject matter.

Independent claim 13 recites a suspension assembly comprising a suspension, a slider body having a trailing edge face and at least one bond pad positioned on the trailing edge face. The suspension assembly further comprises means for providing an electrical connection between a conductive trace and the at least one bond pad using a heating element positioned on the suspension, the heating element having a high resistivity portion and a low resistivity portion.

As stated above, Applicant submits that independent claim 13 is non-obvious in view of the cited references because there is no motivation or suggestion to combine them. Further, Applicant submits that the proposed Tam et al./Schott combination device would not include a heating element "disposed on the suspension" as recited in claim 13. In particular, as stated in the Office Action, Schott does not disclose a heating element having a high resistively portion and a low resistivity portions.

Schott only discloses an external ultrasonic bonding tool. Tam et al., on the other hand, discloses a heating element positioned between a slider 11 and a silicon chip 13 (see FIG. 2) which is simply not "positioned on the suspension." For at least these reasons, Applicant respectfully submits that claim 13 and claims 14-21, depending therefrom, are in allowable form. Further, it is believed that many of these dependent claims independently recite subject matter that is also neither taught nor suggested by the cited references.

For example, dependent claim 17 recites an additional feature similar to that recited in claim 5. For at least the reasons discussed above, Applicant submits that the additional features recited in claim 17 are neither taught nor suggested by

the cited references. Further, dependent claim 19 recites "wherein the means for providing are positioned on a flex circuit." However, the proposed Tam et al./Schott combination device would not include means for providing an electrical connection between a conductive trace and a bond pad using a heating device, the means positioned on a flex circuit. For at least these reasons, Applicant respectfully submits that the additional features recited in claims 17 and 19 are neither taught nor suggested by the cited references. Applicant notes that claims 17 and 19 are simply examples of some of the dependent claims that are believed to contain independently patentable subject matter.

Independent claim 28 recites a suspension interconnect having a suspension and a conductive element positioned on the suspension. A heating element is also positioned on the suspension and includes a low resistivity portion and a high resistivity portion. An insulating component is positioned between the conductive element and the heating element. As stated above, Applicant submits that independent claim 28 is non-obvious in view of the cited references because there is no motivation or suggestion to combine them. Further, even if combined, the proposed Tam et al./Schott combination device would not include an insulation component positioned between a conductive element and a heating element. Further yet, neither Schott nor Tam et al. disclose a heating element "positioned on the suspension" as recited in claim 28. For at least these reasons, Applicant respectfully submits that claim 28 and claims 29-33, depending therefrom, are in allowable form. Further, it is believed that many of these dependent claims independently recite subject matter that is also neither taught nor suggested by the cited references.

For example, dependent claim 32 recites additional features similar to those recited in dependent claims 9 and 11.

For at least the reasons discussed above, Applicant submits that the additional features recited in claim 32 are neither taught nor suggested by the cited references. Applicant notes that claim 32 is simply an example of one dependent claims that is believed to contain independently patentable subject matter.

In view of the foregoing, Applicants submit that the present application is in condition for allowance. Reconsideration and allowance of the application is requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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